

NOTES ON NEW AND NOTEWORTHY PLANTS. CXXXV

Harold N. Moldenke

PAEPALANTHUS SCANDENS var. *ALMASENSIS* Mold., var. nov

Haec varietas a forma typica speciei recedit foliis majoribus coriaceis usque ad 1 cm. longis basin 2 mm. latis pedunculis longioribus usque ad 15 cm. longis et capitulis plerumque proliferantibus.

This variety differs from the typical form of the species in its larger, heavier (coriaceous) leaves, which are to 1 cm. long toward the apex of the stems (smaller below) and there to 2 mm. wide at the base, very stiff and greatly recurved, the peduncles much longer, to 15 cm. long, and the fruiting-heads often proliferating into leaves and/or secondary long-stipitate heads.

The variety is based on *Harley, Mayo, Storr, Santos, & Pinheiro in Harley 19725*, described by the collectors as an erect herb, to 1 m. tall, the leaves coriaceous, recurved, the involucre bracts dark, and the flowers white, and collected among long grass on the slope of the summit ridge of Pico das Almas, about 25 km. west-northwest of the Vila do Rio de Contas, in an area of sandstone conglomerate metamorphic and quartzite rock outcrops with associated scrubby vegetation with damp flushes, grassland and marsh in some areas, approximately 41°57' W., 13°33' S., Serra das Almas, Bahia, Brazil, at 1600--1850 m. altitude, on March 19, 1977.

- - - - -

ADDITIONAL NOTES ON THE GENUS *CONGEA*. II

Harold N. Moldenke

CONGEA TOMENTOSA Roxb.

Additional bibliography: Mold., *Phytologia* 45: 210--216. 1980.

Menninger (1970) asserts that "Usually the bracts [of this species] acquire color in late October [in Florida], become brilliant in the beginning of the new year, then gradually darken until March or April, when the new growth starts. If no seeds are produced, propagation may be effected by stem cuttings, though they tend to root with difficulty." He notes that other cultivated taxa of this genus are var. *nivea* Munir "with more ashy-white pubescence", *C. vestita* W. Griff. with "its individual flowers stalked, and the floral bracts....often deeply notched at their apex", and *C. griffithiana* Munir "with four spatulate or oblanceolate bracts".

Pal & Krishnamurthi (1967) assert that "The plant is more

easily propagated from seeds than cuttings". Woodrow (1910) says that "It thrives in a moist atmosphere, and at Madras becomes 'one blaze of colour with flowering branches one foot in length' (Agri.-Horti. Soc. Report). It is difficult to propagate, and is rare in gardens: layers root tardily, and cuttings in pots with clean sand protected by a bell glass and placed in a shaded frame root fairly."

MacMillan (1913) states that *Congea tomentosa* "is a comparatively recent introduction from Burma, its native home, and in beauty and charm of blossom rivals the most beautiful of flowering climbers. It bears large loose sprays of inflorescence which remain bright and unfaded for several weeks. Like some other well-known favourites, the showy part consists, not of the actual flower but of the bright coloured persistent bracts subtending the flowers. At first of a delicate pink shade, these gradually merge into lighter tints of pleasing contrast. The plant obviously deserves a place in every garden, and will thrive from sea-level to about 3,000 feet elevation. It has not as yet produced seed at Peradeniya [Sri Lanka], but may be propagated with comparative ease if cuttings of the mature wood are inserted in a bed of light sandy soil, during the wet season, and kept shaded and moderately moist." Steiner (1952) asserts that flowering [in the Philippines] lasts from November to March and propagation is by cuttings and layering. He describes the bracts as mauve and spatulate so it is possible that the reference is to *C. griffithiana* rather than to *C. tomentosa*.

Cowen (1950) avers that if only the flower sprays are cut, they will last many days in water, but if the stem is cut along with the flower sprays, it will droop and quickly die.

Gibbs (1974) reports the absence of syringin in the stems of *Congea tomentosa* and negative results with the HCl/methanol test. The pollen is described by Rehman (1962). The chromosome number is reported by Sharma & Mukhopadhyay (1963), Cave (1964), and Bolkskikh & al. (1969) as $2n = 34$, but Rao (1961) reports $n = 18$. Norman R. Farnsworth, in a letter to me dated March 1, 1971, states that "phytochemical screening showed the presence of saponins, but triterpenes, sterols and alkaloids were absent".

Schauer (1847) recognized two varieties under *C. tomentosa* which he distinguished as follows: "*α. latifolia*, foliis subrotundo-ellipticis (3--4 uncias longis, 2 1/2 -- 3 poll. latis) subabrupto acuminatis, involucri phyllis calycibusque paulo majoribus" [the typical form, based on Wallich's no. 1733/2 from Prome, Upper Burma, in 1826] and "*β. oblongifolia*, foliis oblongis (4--6 poll/ long., 2 poll. latis) coarctato-acuminatis, involucri phyllis calycibusque paulo minoribus" [the *C. azurea* Wall. & *Roscoeia villosa* Roxb. form, based on Wallich's no. 1733/1, from Martaban, Lower Burma]. Munir (1966) synonymizes both names under typical *C. tomentosa*.

Roth (1977) notes that "The dry subtending bracts of the flowers of *Congea tomentosa* corresponding at the same time to the prophylls of the partial inflorescences produce a rotary movement of the falling diaspores, since the inflorescence detaches as a dis-

persal unit together with the bracts. The prophylls, with a velvety surface, develop a few layers of a spongy mesophyll parenchyma and a small-celled upper and lower epidermis tightly beset with long ramified hairs. The armed cells of the mesophyll leave large intercellular spaces between them which reduce the specific weight of the diaspore."

Watt (1889) claims that "in Coromandel....it flowers in the cold season, the Chittagong plant flowering in March". He asserts that var. *azurea* "is cultivated in North India".

Altschul (1973) reports the roots of an unidentified species of *Congea* used as a laxative -- judging from the specimen cited this statement doubtless refers to *C. tomentosa*.

While most authors on cultivated plants credit *C. tomentosa* as having been introduced from Burma, Graf (1963) credits it as from India. Corner & Watanabe (1969) ambiguously say "*Congea tomentosa* Roxb. = *C. griffithiana* Munir" -- their accompanying illustration appears to be of *C. griffithiana*.

Clarke (1885) cites *Roxburgh s.n.* [Chittagong] and *Griffith 6013* from Bangladesh and Burma, respectively, as *C. tomentosa*, "Wallich, McLelland, &c." from Burma as *C. tomentosa* var. *azurea*, and *Roxburgh s.n.* [Rangoon] and *Griffith 6012* (in part) from Burma as *C. villosa*.

Diels (1913) cites *Forrest 1144*; Hallier (1918) cites *Hosséus 370*. Munir (1966) cites the following: BANGLADESH: Cowan 244, 802, 1679, 1899, 2377, & s.n.; Lace 2176; Lister 89. INDIA: Assam: Parry 609. Manipur: Watt 5055 & 5105. BURMA: Central & Upper: Anderson s.n.; Aubert & Gage s.n.; Forrest 1144, Fulton s.n. [Watt 10770]; Haines 5776; Huk 208 & s.n.; Kan 260; King s.n.; Kingdon-Ward 21729; MacGregor 1120; Maunders s.n.; McKee 5986; Mc Millan 20; Mokim 25 & s.n.; Mundul 86; Parkinson 15700; Pottinger s.n.; Prazer 36; Rock 1691 & 1923; Rogers 597; Watt 16. Insein: Kan 270; Khant 82. Martaban: Amherst s.n. [Wallich 1733, 1733a, & 1733/1]; Beddome 6531, 6533, & s.n.; Dickason 6869; Falconer 2; Helfer 28, 53, & 6013; Loble s.n. Pegu: Brandis 878 & 880; Collector undetermined 429; Kurz 1039 & 2398; McLelland s.n. Prome & Karenni: Chin 4366; Collector undetermined s.n.; Dickason 6927; Lace 2724; Toppin 2557. Rangoon: Collector undetermined 104 & s.n.; Dickason 3142 & 5662; McLelland s.n.; Meebold 14047; Parkinson 13930; Weiste X.P.L.I. Tenasserim: Gallathy 13; Griffith 6013. THAILAND: Bunpheng 472; Collins 359; Hosseus 370; Kasin 162, Kerr 533, 6368, & s.n.; Larsen & Hansen 6636; Nakkarn 82; Native collector 3810; Put 2283; Vanpruk 163. INDOCHINA: Laos: Pételot 1539; Spire 749 & s.n.. Vietnam: Annam: Poilane 19977. CHINA: Yunnan: Anderson s.n.; Forrest 29388; Wang 72678. CULTIVATED: Burma: Bernard X.P.L.I. Cuba: Eames s.n.; Jack 8486. Florida: Boom 38552; Moore 6007. Haiti: Ekman 9963. India: Balapure s.n.; Erlanson 5368; Griffith 9331; Herb. Bot. Calcutt. s.n.; Herb. Wight s.n.; Raizada s.n.. Java: Herb. Hort. Bogor. XV.E.70 (in part). New York: H. N. Moldenke 9454 (in part). Puerto Rico: Britton & Boynton 8165. Singapore: Deshmukh s.n.; Furtado s.n.; Noor s.n.

According to Munir (1966) part of H. N. Moldenke 9454 in the

New York Botanical Garden herbarium is *C. tomentosa* and part is *C. vestita*.

Material of *C. tomentosa* has been misidentified and distributed in some herbaria as *C. siamensis* Fletcher, *C. vestita* W. Griff., and *Sphenodesme* sp. On the other hand, the Tsai 52611, distributed as *C. tomentosa*, is the type collection of *C. chinensis* Mold.; Rivera s.n. [Philip. Nat. Herb. 33460] and Steiner 597 [Philip. Nat. Herb. 22931] are *C. griffithiana* Munir; Rock 1677 is the type collection of *C. rockii* Mold.; H. M. Smith 314 is *C. siamensis* Fletcher; Bunpheng 1126 [Herb. Roy. Forest Dept. 21137], Collins 2073, Lindhard s.n. [19 Jan. 1904], Pierre s.n. [Cochinchine] & s.n. [ad flum. Dong Nai], and Thorel 648 are *C. tomentosa* var. *nivea* Munir; W. Lee LASCA.923 and Moldenke & Moldenke 19799 are *C. velutina* Wight; while Moldenke & Moldenke 10408 and Pierre s.n. [2/1877] are *C. vestita* W. Griff.

Citations: COSTA RICA: San José: Sieger s.n. [San José, summer 1936] (N). JAMAICA: D. Hummel s.n. [10/4/1958] (S). HISPANIOLA: Dominican Republic: Liogier & Liogier 24710 (N). PUERTO RICO: Otero M.86 (Mi). COLOMBIA: Antioquia: Daniel 3884 (W--1907047). INDIA: Assam: Chand 6869 (Mi); Koelz 27609 (Mi). Madras: Kuria-kose s.n. [12-1-33] (N). West Bengal: J. M. Cowan 2378 (It); Helfer 28 (B, Bt--40758, Bz--20961, Gg--267598, Go, Gz, I, Mu, N, S, W--1668972); Mukherjee s.n. [15.12.68] (Ld). State undetermined: Voigt s.n. BURMA: Martaban: Helfer 6013 (Mu--1064, S). Shan States: Rock 1923 (Ca--264325, W--1214650). Tenasserim: Bélanger 218 (Du--166402). Upper Burma: J. Anderson s.n. [23/1/68] (Mu--3805); Huk 47 (W--369350); King's Collector s.n. [Mak-haye Hill] (Bz--20962); J. R. McMillan 201 (Ca--745115, Mi, W--1864419). Province undetermined: Luxburg s.n. [23.2.1903] (Mu); Rock 774 (W--1171461), 784 (W--1171469); Shaik Mokim 25 (Br). THAILAND: Beusekom & Phengkhilai 87 (Ac); Bunchuai 807 [Herb. Roy. Forest Dept. 24026] (Gg); Charoenphol, Larsen, & Warneke 4483 (Ac, N), 4508 (Ac); Cheviwat & Nimanong 21 (Ac); Cockerell s.n. [Nan] (W--1372352); Collins 359 (W--1700525); Dee 472 [Herb. Roy. Forest Dept. 7345] (Z), 518 [Herb. Roy. Forest Dept. 7742] (Ss); Gram & Syrach-Larsen 114 (Cp); Hosséus 370 (Mu--4191, V), 371 (Mu--4193), 386x (Mu--4192); Lindhard s.n. [19 Jan. 1904] (N, S); Phenklai, Nimanong, & Singhasithit 3041 (Ac); Phloenchit 78 [Herb. Roy. Forest Dept. 10692] (Ss); Rock 1691 (W--1213305); Sørensen, Larsen, & Hansen 6636 (Bm); Surapat 42 (W--2450888). INDOCHINA: Cochinchina: Pierre s.n. [2/1877] (B), s.n. [1877] (B), s.n. (B). Laos: Pételot 1539 (Ca--236744); Spire 749 (B). Vietnam: Poilane 11674 (B). MALAYA: Kedah: Kadir 35802 (Bz--72779), 35803 (Bz--72778). CULTIVATED: Bangladesh: Zeyauddin 148 (Kh). Colombia: Duque 1595 (N, W--1744505). Costa Rica: Kupper s.n. (Mu). Cuba: Acuña 15996/16220/16513 (Es); Dahlgren s.n. [March 30, 1950] (W--2159350); Eames s.n. [Soledad, March 7, 1948] (Ca--772702); J. G. Jack 8486 (Du--357471, N, Pd, W--1556245). Dominica: L. H. Bailey 747 (Ba, Ba); Hodge 3654 (Ms). Dominican Republic: B. Augusto 646 (N). Florida: Fairchild Trop. Gard. 2150 (Ft); Gillis 7564 [Fairchild Gard. 59-759] (Ac, Ba); H. E. Moore 6007 (Ba); O'Neill s.n. [Feb. 28, 1933] (I); Sheehan R.23 (Ba).

Haiti: *Buch* s.n. [Ekman H.9963] (Ld, N, W--1413839); *S. B. May* s.n. [1935] (N). Honduras: *Boghdan & Barkley* 39438 (Ac); *Pfeifer* 1739 (W); *Yuncker* 4787 (Dp). India: *Erlanson* 5368 (Mi, N); *Herb. Hort. Bot. Bogor.* s.n. (T); *Herb. Hort. Bot. Calcutt.* s.n. (Bz--20963, Mu--1063, Mu--1168, Mu--1169, Pd, T). Jamaica: *L. H. Bailey* s.n. [April 2, 1948] (Ba). Java: *Herb. Hort. Bot. Bogor.* XV.E.3 (Bz--26256, Bz, Bz, N), XV.E.70 in part (Bz--26275, Bz, Bz, N), s.n. (Bz--72775, Bz--72776, Bz--72777, Er); *Herb. Hort. Tuinherb.* s.n. [1905] (S). Martinique: *Stehlé & Stehlé* 4311 (W--2453708). New York: *Boynton* s.n. [N. Y. Bot. Gard. Cult. Pl. 54967] (N); *H. N. Moldenke* 8420 [N. Y. Bot. Gard. Cult. Pl. 5496] (N), 9454 in part (Ar, Ba, Bm, Br, Br, Cm, E, Go, Ml, N, Nd, Po, St, Ur). Panama: *Moldenke & Moldenke* 19799 (N); *F. Nelson* s.n. [10 April 1976] (Ld, Uw). Philippines: *M. L. Steiner* s.n. [Philip. Nat. Herb. 22931] (Mg). Puerto Rico: *Britton & Boynton* 8164 (N); *Howard & Nevling* 16914 (Ba); *R. J. Wagner* 762 (S). Singapore: *Furtado* s.n. [Nov. 15, 1927] (Ca--343101); *Nur* s.n. [25 Dec. 1924] (Ba). Sri Lanka: *F. W. De Silva* 4 (Pd). Tobago: *L. M. Andrews* 3-50 (N). Trinidad: *W. E. Broadway* 6891 (Um--140, W--1411459); *Friend* 88 (N). Venezuela: *Croizat* 2 (N, Ve); *Lasser* 3466 (Ve--36915); *Skog* 1224 (W--2705159); *Valero & Rice* V.40 (Ld, Ld).

CONGEA TOMENTOSA var. *NIVEA* Munir, Gard. Bull. Singapore 21: 310--312, fig. 10a. 1966.

Synonymy: *Congea oblonga* Pierre in Dop, Bull. Soc. Bot. France 61: 320--321. 1915. *Congea peteloti* Mold., Phytologia 3: 409. 1951. *Congea alba* Harler, Gard. Plains, ed. 4, 185. 1962. *Congea tomentosa* "Roxb. sec. Fletcher" apud Munir, Gard. Bull. Singapore 21: 310, in syn. 1966 [not *C. tomentosa* Roxb., 1819]. *Congea velutina* "Wight sec. Dop" apud Munir, Gard. Bull. Singapore 21: 310, in syn. 1966 [not *C. velutina* Wight, 1849]. *Congea vestita* "Griff. sec. Dop" apud Munir, Gard. Bull. Singapore 21: 310, in syn. 1966 [not *C. vestita* W. Griff., 1854]. *Congea oblonga* Dop apud Munir, Gard. Bull. Singapore 21: 310, in syn. 1966.

Bibliography: Dop, Bull. Soc. Bot. France 61: 320--321. 1915; Prain, Ind. Kew. Suppl. 5, imp. 1, 65. 1921; Dop in Lecomte, Fl. Gén. Indochine 4: 908 & 910. 1936; Fedde & Schust, Justs Bot. Jahresber. 60 (2): 572. 1941; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 59 & 92 (1942) and ed. 2, 136 & 173. 1949; Mold., Résumé 175 & 439. 1959; G. Taylor, Ind. Kew. Suppl. 12: 38. 1959; Prain, Ind. Kew. Suppl. 5, imp. 2, 65. 1960; Harler, Gard. Plains, ed. 4, 185. 1962; Mold., Résumé Suppl. 5: 6 (1962) and 12: 7. 1965; Munir, Gard. Bull. Singapore 21: 267, 269, 275, 276, 305, & 310--314, map 2, fig. 10a. 1966; Mold., Résumé Suppl. 15: 10, 15, & 20 (1967) and 16: 13. 1967; Munir, Biol. Abstr. 48: 5018. 1967; Mold. in Menninger, Flow. Vines 328. 1970; Mold., Fifth Summ. 1: 295, 300, 361, 468, & 469 (1971) and 2: 843. 1971; Mold., Phytologia 45: 56, 57, 59--61, 211, & 216. 1980.

Illustrations: Munir, Gard. Bull. Singapore 21: 311, fig. 10a. 1966.

This variety is said to differ from the typical form "by its branchlets and inflorescence axis being cinereo-tomentose even when young, involucre bracts obovate or broadly elliptic, white-tomentose, sometimes tinged mauve when fresh. Calyx cinereo-pubescent without, lobes one-third the length of the calyx-tube or shorter with no accessory teeth; corolla with a broader villous band in the throat". It is based on *Noor & Munir* 5, collected in the Botanical Garden at Singapore.

Harler's *C. alba* is described by him as "a white variety of *C. tomentosa*" and I am assuming that it belongs here. *Congea oblonga* Pierre is based on *Pierre* 5229 from Kam-pot, Cambodia. Dop says of it: "Cette espece parait voisine, par son appareil vegetatif, du *C. Forbesii* King et Gamble, de Sumatra. Elle s'en distingue par l'absence de bracteoles lineaires, le calice beaucoup plus long, tomenteux et non villeux". *Congea peteloti* Mold. is based on *Pételot* 3852a from Thom, Tonkin [Vietnam].

Recent collectors describe this plant as a woody climber or a shrub, 1.5 m. tall, abundantly flowering, "the whole inflorescence beautiful pink", the bracts whitish above, greenish beneath, and the stamens maroon. They have found it growing along roadsides and in thickets on sandy calcareous soil, at 100--600 m. altitude, in flower in January, March, and November. The corollas are said to have been "white" on *Bunpheng* 1126, "greenish" on *Phengkhilai* 554, and "white with maroon dots" on *Maxwell* 74-1088.

In Thailand Phengkhilai reports the plant "scattered" in dry evergreen forests on hillsides; Lindhard found it "very common in the mountains"; Bunpheng says that it is "common" in deciduous forests, while Maxwell reports it "abundant in the deciduous forest canopy".

It should be noted that the Dop (1936) reference in the bibliography (above) is often cited, but apparently erroneously, as "1935", while his 1915 reference is sometimes cited as "1914", but a footnote on the titlepage plainly indicates that the work was not actually issued until 1915.

Munir (1966) cites the following collections: THAILAND: Collins 2073, Kerr 9516, Lakshnakara 491, Marcan 1072 & 1550, Put 2101. CAMBODIA: Evrard 2459, Poilane 14639 & 23271. LAOS: Joseph s.n., Pételot 3852 & 3853. VIETNAM: Annam: Poilane 11695. Cochinchina: Poilane 2413. CULTIVATED: Java: Dilmy s.n., Herb. Bot. Gard. Bogor. X.G.62, XV.E.78, XV.E.78a, Soepadmo l. Singapore: Furtado s.n., Munir s.n., Munir 4, Noor & Munir 5. He suggests that *C. vestita* var. *subvestita* Munir may represent a natural hybrid between this species and *C. vestita* W. Griff.

Citations: THAILAND: Beusekom & Phengkhilai 2573 (Ac); Bunpheng 1126 [Herb. Roy. Forest Dept. 21137] (Z); Collins 2073 (W--1701665); Lindhard s.n. [19 Jan. 1904] (Mu--4194); Maxwell 74-1088 (Ac); Phengkhilai 554 [Herb. Roy. Forest Dept. 28432] (Cp). LAOS: Pételot 3852 (N). VIETNAM: Annam: Poilane 11695 (B, Ca--53769). Cochinchina: Pierre s.n. [ad flum. Dong Nai] (Bz--72805, S), s.n. [Bavia] (Ca--53764), s.n. [Cochinchine] (Bz--72804, Ca--53766, S); Poilane 2413 (B); Thorel 648 (B, Bz--72929, Ca--38890, S). South Vietnam: R. M. King 5637 (W--2436032). Tonkin: Pételot

3852a (N).

CONGEA VELUTINA Wight, Icon. Pl. Ind. Orient. 4 (3): 15. 1849
[not *C. velutina* "Wight sec. Dop", 1966].

Synonymy: *Congea velutena* Wight, Icon. Pl. Ind. Orient. 4 (3): pl. "1479/3 or 1566". 1849. *Congea tomentosa* Hall. f. ex Mold., Alph. List Inv. Names Suppl. 1: 8, in syn. 1947 [not *C. tomentosa* Cooke, 1921, nor King & Gamble, 1921, nor Roxb., 1819, nor "Roxb. sensu King & Gamble", 1966, nor "Roxb. sec. Wight", 1960, nor "Roxb. sec. Fletcher", 1966, nor R. & B., 1979]. *Congea tomentosa* var. *velutina* (Wight) Bakh. ex Mold., Résumé 275, in syn. 1959. *Congea velutinus* Wight ex Mold., Phytologia 23: 430, in syn. 1972.

Bibliography: Wight, Icon. Pl. Orient. 4 (3): 15, pl. "1479/3 or 1566". 1849; Wight, Illustr. Ind. Bot. 2: pl. 173 bis. 1850; C. B. Clarke in Hook. f., Fl. Brit. India 4: 603. 1885; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 595. 1893; Gamble, Man. Indian Timb., ed. 2, imp. 1, 545. 1902; C. B. Clarke in J. Schmidt, Bot. Tidsskr. 26: 174. 1904; Brandis, Indian Trees, imp. 1, 513. 1906; Bakh. in Lam & Bakh., Bull. Jard. Bot. Buitenz., ser. 3, 3: 100 & 101. 1921; Gamble, Man. Indian Timb., ed. 2, imp. 2, 545. 1922; Ridl., Dispers. Pl. World pl. 6. 1930; Stapf, Ind. Lond. 2: 277. 1930; Engles.-Julius, Tuin. Wagen. Ind. Laagulakte 47. 1932; Dop in Lecomte, Fl. Gen. Indo-chine 4: 908--910 & 912, fig. 94 (3) & 95 (1--3). 1936; Worsdell, Ind. Lond. Suppl. 1: 248. 1941; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 54, 55, 61, 63, 73, & 92. 1942; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 1: 595. 1946; Mold., Alph. List Inv. Names Suppl. 1: 8. 1947; Neal, In Gard. Hawaii, ed. 1, imp. 1, 635, 645, & 774 (1948) and ed. 1, imp. 2, 635, 645, & 774. 1949; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 126, 129, 139, 143, 160, & 173. 1949; Mold., Résumé 142, 161, 165, 179, 188, 190, 193, 217, 275, & 439. 1959; Jacks in Hook. f. & Jacks., Ind. Kew., imp. 3, 1: 595. 1960; Mold., Résumé Suppl. 3: 20 & 28. 1962; R. Good, Geogr. Flow. Pl. 210. 1964; Backer & Bakh., Fl. Java 2: 612 & 613. 1965; Neal, In Gard. Hawaii, ed. 2, 720, 732, & 885. 1965; Munir, Gard. Bull. Singapore 21: 263, 267, 272, 275, 276, 279, 296--298, 313, & 314, map 5, fig. 6 (1966) and 22: 158. 1967; Mold., Résumé Suppl. 15: 7, 9, 15, & 20. 1967; Backer & Bakh., Fl. Java 3: 657. 1968; Keng, Ord. Fam. Malay. Seed Pl. 280. 1969; Van der Pijl, Princip. Dispers. Higher Pl., ed. 1, 57--58. 1969; Menninger, Flow. Vines 49. 1970; Brandis, Indian Trees, imp. 2, 513. 1971; Mold., Fifth Summ. 1: 273, 283, 295, 305, 323, 361, 468, & 469 (1971) and 2: 843. 1971; Gamble, Man. Indian Timb., ed. 2, imp. 3, 545. 1972; Mold., Phytologia 23: 423 & 430. 1972; Van der Pijl, Princip. Dispers. Higher Pl., ed. 2, 57. 1972; Mold., Phytologia 28: 449. 1974; O. & I. Degener, Hawaii. Pl. Names x. 1975; Mold., Phytologia 34: 269. 1976; Clay & Hubbard, Haw. Gard. Trop. Shrubs 185 & 288. 1977; Mukherjee & Chanda, Trans. Bose Res. Inst. 41: 44. 1978; Mold., Phytologia 45: 56--59, 61, 210, & 216. 1980.

Illustrations: Wight, Icon. Pl. Ind. Orient. 4 (3): pl. "1479/

3 or 1566". 1849; Wight, *Illustr. Ind. Bot.* 2: pl. 173 bis. 1850; Ridl., *Dispers. Pl. Through. World* pl. 6. 1930; Engles-Julius, *Tuin. Wegen Ind. Laagvlakke* 47. 1932; Dop in Lecomte, *Fl. Gen. Indo-chine* 4: 909 & 912, fig. 94 (3) & 95 (1--3). 1936; Munir, *Gard. Bull. Singapore* 21: 297, fig. 6. 1966.

Recent collectors describe this plant as a large, scandent or somewhat scandent-climbing shrub, 2 m. tall, or as an attractive ornamental vine, the wood tan-brown, the leaves dark-green, velutinous beneath, the 4 bracts very conspicuous and showy, rounded at their apex and obovate-spatulate in shape, "profuse and most colorful", velvety in texture, grayish-white or lavender to pink, lilac, or magenta, the calyx yellowish-green, shortly 5-fid, the "teeth not short and obtuse", the corolla 2-lipped, exserted, "sparsely glabrous [=subglabrous?] outside", densely villous in the throat, the filaments pink, and the anthers orange. They have found it growing in semi-moist ground, flowering from January to March, as well as in September and November. Pancho reports that it is a "popular ornamental vine in the Philippines". Van der Pijl (1969) asserts that "colored wings develop from the bracts [and] first collaborate in attracting animals for pollination, then [later on serve] for dispersal [of the seeds]".

The "flowers" [corollas? bracts?] are said to have been "purple" on *Inafuku s.n.*, "white, pink at base" on *Soepadmo 1*, and "purple except for white lobe-margins and base of tube" on *Furtado s.n.*

Vernacular names reported for this species are "lau-huila-ho'one'e", "molentjes bloem", "pink sandpaper vine", and "propellerplant".

The *Congea tomentosa* credited to King & Gamble and to "Roxb. sensu King & Gamble" in the synonymy (above) applies to *C. griffithiana* Munir, while *C. tomentosa* "Roxb. sec. Wight" applies to *C. vestita* W. Griff.

Backer & Bakhuizen (1965) give the natural distribution of *C. velutina* as "native to Further India and Malay Peninsula". In Java it is said to be a common ornamental "from 1--800 m." altitude. Clarke (1885) cites only *Griffith 838* from the Mergui Archipelago and *Helper 6012* from Tavoy, Burma. Munir (1966) cites *Helper 6012* & *s.n.* and *Parker 2579* from the Mergui Archipelago and *Hamid 3769*, *Keith 2*, and *Kloss 6703* from Thailand. The species is widely cultivated and appears to have escaped and become naturalized in Indonesia and Zaire.

Material of *C. velutina* has been misidentified and distributed in some herbaria as *C. tomentosa* Roxb., *C. villosa* Wight, and *Symphorema luzonicum* (Blanco) Fern.-Villar. On the other hand, the *Herb. Hort. Bot. Bogor. XII.B.IX.53*, *XV.E.1*, *XV.E.71*, & *XV.E.71a*, *Pancho 204*, and *Whistler W.843*, distributed as *C. velutina*, actually are *C. griffithiana* Munir.

Citations: ZAIRE: *Goossens 4511* (Br, Br, N). BURMA: *Wallich 1733* (Pd). MERGUI ARCHIPELAGO: *Parker 2579* (Ca--358719). THAILAND: *Bogner 419* (Mu); *J. Schmidt 433* (Mu--4195); *H. M. Smith 314* (Ca--926534); *Snan 913* [Herb. Roy. Forest Dept. 16175] (Bk). GREATER SUNDA ISLANDS: Borneo: *Tatong 2000* (Bz--20965, Le--

92266-32). Java: *Bakhuizen van den Brink* 285 (Bz--20970, Le--92266-91, Ut--63814); *Brinkman* 480 (Bz--20972); *Veldhuis* 62 (Ut--66590a); *Visser* C.90401 (Le--938210-47). Sumatra: *Jacobson* 90 (Bz--20960). CULTIVATED: California: *W. Lee LASCA*.923 (Sd--80066). Hawaiian Islands: *Eastwood* s.n. [Honolulu, August 1--16, 1924] (Gg--34506); *Inafuku* s.n. [Feb. 2, 1931] (Ba, Bi, Mu, N--photo, Z--photo); *Isenberg* 12775 (Bi). India: *Scott* s.n. (Pd). Java: *Bakhuizen van den Brink* 1555 (Ut--24899A, Ut--24900A), 2642 (Bz--20971), 2694 (Bz--20969); *Herb. Hort. Bot. Bogor* s.n. (Bz--20964, Z); *Herb. Mus. Bot. Upsal* s.n. [Buitenzorg Hort. Bot., 1932] (B, N); *Hofstee* 59 (Bz--20968); *Leeuwen-Reijnvaan* s.n. [10/8/09] (Bz--20973); *Popta* 60 (Bz--20967); *Soepadmo* 1 [Herb. Hort. Bot. Bogor. X.G.62] (N). Panama: *Moldenke & Moldenke* 19799 (N). Philippine Islands: *MacDaniels* 31 (Ba, Ws); *Pancho* 1093 (Ba); *Steiner* 504 (W--2376501). Sarawak: *Clemens & Clemens* 20479 [field no. 6571] (Bz--20966, N). Singapore: *Clemens & Clemens* 22567 (N); *Furtado* s.n. [Nov. 15, 1927] (Ca--343117). Sri Lanka: *Moldenke, Moldenke, Jayasuriya, & Dassanayake* 28339 (Pd). Zaire: *Corbisier* 110 (Br); *Vanderyst* 24690 (Br); *Vermoesen* 2156 (Br, Br, N, N. Qu).

CONGEA VESTITA W. Griff., Notul. Pl. Asiat., imp. 1, 4: 174--175. 1854 [not *C. vestita* "Griff. sec. Dop", 1966]

Synonymy: *Congea tomentosa* "Roxb. sec. Wight" apud Munir, Gard. Bull. Singapore 21: 302, in syn. 1966 [not *C. tomentosa* Hall. f., 1947, nor King & Gamble, 1959, nor Roxb., 1819, nor "Roxb. sec. Dop", 1966, nor "Roxb. sec. Fletcher", 1966, nor "Roxb. sensu King & Gamble", 1966]. *Congea vestita* var. *vestita* [W. Griff.] ex Munir, Gard. Bull. Singapore 21: 302. 1966.

Bibliography: W. Griff., Icon. Pl. Asiat. 4: pl. 458, fig. 21. 1854; W. Griff., Notul. Pl. Asiat., imp. 1, 4: 174--175, 513, & 749, pl. 458, fig. 21. 1854; C. B. Clarke in Hook. f., Fl. Brit. India 4: 603. 1885; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 595. 1893; Gamble, Man. Ind. Timb., ed. 2, imp. 1, 545. 1902; Brandis, Indian Trees, imp. 1, 513. 1906; King & Gamble, Journ. Asiat. Soc. Bengal 74 (2 extra): 865--866. 1908; H. J. Lam, Verbenac. Malay. Arch. 337, 338, & 365. 1919; Bakh. in Lam & Bakh., Bull. Jard. Bot. Buitenz., ser. 3, 3: 101 & x. 1921; Gamble, Man. Indian Timb., ed. 2, imp. 2, 545. 1922; Ridl., Fl. Malay Penins. 2: 640. 1923; Dop in Lecomte, Fl. Gén. Indo-chine 4: 908 & 911. 1936; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 55 & 92. 1942; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 1: 595. 1946; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 129 & 173. 1949; Mold., Resume 165, 177, 179, 217, & 439. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 1: 595. 1960; Mold., Resume Suppl. 3: 19. 1962; Munir, Gard. Bull. Singapore 21: 263, 265, 267, 271, 274--276, 279, 302--304, 313, & 314, map 4, fig. 9 (1966) and 22: 157. 1967; Mold., Resume Suppl. 15: 9 & 20. 1967; Mold. in Menninger, Flow. Vines 328. 1970; Brandis, Indian Trees, imp. 2, 513. 1971; W. Griff., Notul. Pl. Asiat., imp. 2, 4: 174--175 & 513. 1971; Mold., Fifth Summ. 1: 283, 295, 300, 305, 361, 468, & 469 (1971) and 2: 843. 1971; Gamble, Man. Indian Timb., ed. 2, imp. 3, 545. 1972; Mold., Phytologia 23: 423. 1972.

Illustrations: W. Griff., Icon. Pl. Asiat. 4: pl. 458, fig. 21. 1854; Munir, Gard. Bull. Singapore 21: 303, fig. 9. 1966.

Recent collectors refer to this plant as an extensive climber or liana, the bracts purple, the flowers scented, and the fruit winged, and have found it growing at 35--500 m. altitude, flowering from February to April and in November. The "flowers" [corollas?] are said to have been "pink" on *Sangkhachand* 757, "violet" on *Collector undetermined* 16, and "white" on *Kasin* 162. In Thailand *Sangkhachand* reports the species "common" in evergreen forests, while an unidentified collector found it "scattered in evergreen forests and some in deciduous forests".

The species is based on *Griffith* 898 from Mergui in the Burmese Mergui Archipelago and deposited in the Edinburgh herbarium. The *C. tomentosa* Hall. f., referred to in the synonymy above, belongs in the synonymy of *C. velutina* Wight, while the homonym credited to King & Gamble and to "Roxb. sensu King & Gamble" is *C. griffithiana* Munir and *C. tomentosa* Roxb. is a valid species. The *H. N. Moldenke* 9454, cited below, is a mixture of *C. vestita* and *C. tomentosa* Roxb.

Clarke (1885) cites for *C. vestita* only *Helfer* 6014 from Tenasserim and *Griffith* s.n. from the Mergui Archipelago. Munir (1966) cites the following collections: BURMA: *Beddome* 6530, *Helfer* 6014, *Lace* 4802 & 5591, *Meebold* 16999, *Pachman* 116, *Rogers* 406, *Wight* 2305. MERGUI ARCHIPELAGO: Mergui: *Griffith* 898, *Griffiths' Collector* s.n., *Meebold* 14078, *Proudlock* 44. CULTIVATED: Java: *Herb. Hort. Bot. Bogor.* XV.E.70 (in part). New York: *H. N. Moldenke* 9454 (in part).

Material of *C. vestita* has been misidentified and distributed in some herbaria as *C. peteloti* Mold., *C. tomentosa* Roxb., and *C. velutina* Wight. On the other hand the *Pierre* s.n. [Cochinchine], distributed as *C. vestita*, appears to be *C. pedicellata* Munir, while *Pierre* s.n. [Bavia] & s.n. [ad flum. Dong Nai], *Poilane* 11695, and *Thorel* 648 are *C. tomentosa* var. *nivea* Munir.

Citations: BURMA: *Helfer* 6014 (Mu--10540). MERGUI ARCHIPELAGO: Mergui: *Meebold* 14078 (N, N--photo, S, Si--photo, Z--photo). THAILAND: *Collector undetermined* 16 [Herb. Roy. Forest Dept. 18043] (Bk); *Kasin* 162 (Bz--72806); *Sangkhachand* 757 [Herb. Roy. Forest Dept. 23748] (Z). VIETNAM: Cochinchina: *Pierre* s.n. [2.1877] (S). MALAYA: Kedah: *Spare* 37314 (Bz--72781); *Wolfe* & *Kadir* 21455 (Bz--72780). CULTIVATED: Java: *Herb. Hort. Bot. Bogor.* XV.E.70 in part (Bz--26276, Bz, N). New York: *Connolly* s.n. [N. Y. Bot. Gard. Cult. Pl. 5496] (N, N); *H. N. Moldenke* 9454 (N, Qu), 9454a (N), 10408 (Go, N, Se--171585, Ur).

CONGEA VESTITA var. *SUBVESTITA* Munir, Gard. Bull. Singapore 21: 304--305. 1966.

Bibliography: Munir, Gard. Bull. Singapore 21: 267, 271, 275, 276, 279, 304--305, & 313, map. 4. 1966; Munir, Biol. Abstr. 48: 5018. 1967; Mold., Resume Suppl. 15: 10. 1967; Mold., Fifth Summ. 1: 300 (1971) and 2: 843. 1971; Mold., Phytologia 45: 61 & 275. 1980.

This variety differs from the typical form of the species in hav-

ing its branchlets, rachis, and the lower surface of its leaf-blades faintly yellowish-pubescent, rather than hirsute.

The variety is based on *Kloss s.n.* from Daban, at 650 meters altitude, Phan Rang, Vietnam, deposited in the herbarium of the British Museum in London. Munir (1966) cites only the type specimen and suggests that the taxon may represent a natural hybrid with *C. pedicellata* Munir or *C. tomentosa* var. *nivea* Munir.

- - - - -

MATERIALS TOWARD A MONOGRAPH OF THE GENUS *LAMPAYA*

Harold N. Moldenke

There is the 48th genus to be treated in my series of notes in the present journal. Although time has not been available to make a formal monograph, it has been thought advisable to place on record here the notes on this genus assembled by my wife and myself over the past fifty years of intensive library and herbarium research so that they will be available to future monographers. Full explanation of the herbarium acronyms hereinafter employed (as they have been in all of my long series of papers in this journal since 1933) will be found in my "Fifth Summary of the *Verbenaceae*" (1971), volume 2, pages 795 to 801.

LAMPAYA R. A. Phil., Ann. Mus. Nac. Chile Bot. 1: 58. 1891.

Synonymy: *Lampaya* F. Phil., Verh. Deutsch. Wiss. Ver. Santiago 1: 160, in obs. 1886; Mold., Suppl. List Inv. Names 21. 1941.

Lampayo Phil. ex Murillo, Pl. Médic. Chil. 163, nom. nud. 1889; Mold., Suppl. List Inv. Names 4, in syn. 1941.

Bibliography: F. Phil., Verh. Deutsch. Wiss. Ver. Santiago 1: 160. 1886; Murillo, Pl. Méd. Chil. 163. 1889; R. A. Phil., Ann. Mus. Nac. Chile Bot. 1: [Cat. Praev. Pl. Itin. Tarap.] 58, pl. 2, fig. 5. 1891; R. A. Phil., Verz. Hoheeb. Prov. Antofag. Tarap. Pfl. pl. 2. 1891; Briq. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, Nachtr. zu 4 (3a): 290. 1897; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 237. 1903; Dalla Torre & Harms, Gen. Siphonog., imp. 1, 430. 1904; Fries, Nov. Act. Reg. Soc. Sci. Upsal. 4 (1): [Nord Argent.] 110. 1905; Reiche, Verhandl. Deutsch. Wiss. Ver. Santiago 5: 6. 1905; Reiche & Phil. in Reiche, Estud. Crit. Fl. Chile 5: 272 & 303--304. 1910; M. Kunz, Anatom. Untersuch. Verb. 35 & 36. 1911; Nienburg, Justs Bot. Jahresber. 39 (2): 1051. 1916; Fedde, Justs Bot. Jahresber. 39 (2): 1420. 1917; Dominguez, Invest. Fito-quim. 196. 1928; Baeza, Nomb. Vulg. Pl. Silv., ed. 2, 122. 1930; Stapf, Ind. Lond. 4: 37. 1930; Junell, Symb. Bot. Upsal. 1 (4): 36--37. 1934; A. W. Hill, Ind. Kew. Suppl. 9: 154. 1938; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 2, 237. 1941; Mold., Phytologia 2: 51--52. 1941; Mold., Suppl. List Inv. Names 4. 1941; Mold., Alph. List Inv. Names 27. 1942; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 42, 43, & 94. 1942; Mold., Alph. List Cit. 1: 95 (1946) and 2: 537. 1948; H. N. & A. L. Mold., Pl. Life 2: 31, 43, 53, & 64. 1948; Mold., Alph. List Cit. 3: 690 & 813 (1949) and 4: 1293. 1949;